



EVIDENCE-BASED REVIEW

An overview of two Cochrane systematic reviews of complementary treatments for chronic asthma: acupuncture and homeopathy[☆]

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KEYWORDS

Systematic reviews;
Asthma;
Acupuncture;
Homeopathy

Summary Background: Acupuncture and homeopathy are commonly used complementary treatments for chronic asthma. This review summarizes two recently updated Cochrane systematic reviews that assess the safety and efficacy of homeopathy or acupuncture in individuals with chronic stable asthma.

Inclusion criteria: Only randomized-controlled trials were considered for inclusion. Statistical aggregation of the data was undertaken where possible.

Search strategy: Searches for both reviews were done with the assistance of the Cochrane Airways Group, and through electronic alerts.

Results: Acupuncture: 11 studies with 324 participants met the inclusion criteria. Trial reporting was poor, and the trial quality was deemed inadequate to generalize the findings. There was variation in the type of active and sham acu punctures, the outcomes assessed and the time points measured. The points used in the sham arm of some studies are used for the treatment of asthma according to traditional Chinese medicine. Two studies used individualized treatment strategies, and one study used a combination strategy of formula acupuncture with the addition of individualized points. No statistically significant or clinically relevant effects were found for acupuncture compared with sham acupuncture. When data from two small studies were pooled, no difference in lung function was observed (post-treatment FEV₁): standardized mean difference 0.12, 95% confidence interval –0.31 to 0.55).

Conclusion: Acupuncture: There is not enough evidence to recommend the use of acupuncture in the treatment of asthma. Further research needs to be undertaken, and this should take into account the different types of acupuncture practiced.

Results: Homeopathy: Six trials with a total of 556 people were included in the

[☆]The following Cochrane reviews have been cited in this evidence-based review: McCarney RW, Brinkhaus B, Lasserson TJ, Linde K. Acupuncture for chronic asthma. The Cochrane Library, Issue 3, 2004; and McCarney RW, Linde K, Lasserson TJ. Homeopathy for chronic asthma. The Cochrane Library, Issue 3, 2004. Copyright Cochrane Library, reproduced with permission.

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review. These trials were all placebo-controlled and double-blind, but were of variable quality. Standardized treatments in these trials are unlikely to represent common homeopathic practice where treatment tends to be individualized. The results of the studies are conflicting in terms of effects on lung function. There has been only a limited attempt to measure a "package of care" effect (i.e. the effect of the medication as well as the consultation, which is considered a vital part of individualized homeopathic practice).

Conclusion: Homeopathy: There is not enough evidence to reliably assess the possible role of homeopathy in the treatment of asthma. Further studies could assess whether individuals respond to a "package of care" rather than the homeopathic intervention alone.

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Background

Bronchial asthma is a major health problem and is associated with significant morbidity. The reported prevalence of asthma in children ranges from 1.6%–35% in different countries, whereas the prevalence of asthma symptoms in adults ranges from 4.1%–32% in Europe.¹ Although the symptoms can be controlled by drug treatment in most patients, effective low-risk, non-drug strategies would provide a valuable adjunctive or alternative treatment in asthma management.

There is much interest in complementary and alternative medicine (CAM), and its use is growing at a significant rate.² The term CAM covers a large number of therapies, sometimes with no apparent connection, as they can often have diverse origins, theories, and appearances. There are no hard and fast definitions of what exactly constitutes CAM, but a good practical definition is "interventions neither taught widely in medical schools nor generally available in hospitals".³ Although the use of CAM can be the result of dissatisfaction with conventional treatment,⁴ it can also be an expression of taking personal responsibility in dealing with chronic illness.⁵ Two common types of CAM used by people with asthma are homeopathy and acupuncture. In one survey, 9% of responders had used homeopathy and 5% had used acupuncture in the previous year.⁶

Acupuncture

Acupuncture is a form of therapy derived from traditional Chinese medicine, which involves the stimulation of points on the body with the use of needles for therapeutic or preventative purposes. As the use of acupuncture has become more prevalent in the West, these theories have been developed to fit in with a Western understanding of

bodily function.⁷ Other methods of stimulation have been used, such as the use of pressure (acupressure) and, more recently, the use of lasers. One important but under-researched aspect of treatment is the subjective element of this complex therapy. It is difficult to remove acupuncture treatment from its context, and this has not been addressed in existing research.

Homeopathy

Homeopathy is one of the most widespread and controversial forms of complementary or alternative medicine. Surveys among general practitioners and chest physicians suggest that a significant proportion might seek additional advice from homeopaths.^{8,9}

Homeopathy is based on the principle of "like curing like" (*similia similibus curentur*): a preparation that would cause certain symptoms is used to cure those symptoms. Homeopathic remedies are prepared as "potencies", with several consecutive dilutions with vigorous shaking (succussion) between each dilution step. The molecules contained in a homeopathic remedy are diluted beyond Avogadro's number. This has led some investigators to question whether homeopathic therapy could have any effect over placebo.¹⁰ However, proponents of homeopathy claim that the remedies act through biophysical pathways, and all include the idea of some form of information transfer from the diluted substance to the diluting agent.^{11–14}

At least four basic types of homeopathy are differentiated in this review. For chronic diseases such as asthma, the "classical" homeopathic approach is probably most widespread. In classical homeopathy, the choice of the remedy is determined by the individual symptoms of each patient. As a consequence, different asthma patients might receive very different remedies, fitting their

individual symptom patterns. Classical homeopathy involves detailed and intense history taking, which might give rise to significant non-specific "package of care" effects. "Clinical" homeopathy, by contrast, uses the same remedy in patients presenting with a relatively homogeneous pathology or constellation of symptoms.

In some conditions (e.g. atopic asthma), a diluted causative agent (e.g. potentized pollen) may be used. This is called "isopathy". The use of fixed combinations of several homeopathic remedies (so-called "complex" remedies or "complex homeopathy") for one or a limited number of conditions is popular among general practitioners or "beginners" of homeopathy, and is particularly widespread in Europe, especially Germany and France.

The objective of this overview is to summarize two recently published Cochrane reviews.^{15,16} In these reviews, we evaluated the evidence for the efficacy of acupuncture and (separately) homeopathy for the treatment of patients with stable chronic asthma. These reviews^{15,16} can be referred to for more detailed information. We have detailed the methodology common to both reviews, and have then reported the findings of each review separately. A summary of common conclusions is provided at the end.

Methods common to both reviews

We identified studies assessing the effects of acupuncture or homeopathy for chronic asthma. Our inclusion criteria were as follows: randomized-controlled trials, patients of any age with stable chronic asthma or asthma-like symptoms, and a treatment duration of over 1 week (to exclude patients with acute asthma or studies that only assessed short-term effects). The control treatments included no treatment (other than conventional asthma medicines), sham or placebo acupuncture, or homeopathy and active comparator interventions. Our primary outcome was lung function. Other outcomes considered important were medication use, quality of life, symptoms, exacerbations, and global assessment of effectiveness. The Jadad¹⁷ scale was used to rate the quality of reporting of included trials.

Two reviewers assessed the search results and determined whether studies met the inclusion criteria. We extracted data and calculated effect size with RevMan Version 1.0.1 (Cochrane Collaboration, Oxford, UK). For dichotomous or binary data (e.g. admission to hospital), we used a fixed-

effects model and relative risk was calculated. For continuous data (e.g. lung function), we used a fixed-effects model and weighted mean difference was calculated. Continuous data measured on different metrics (e.g. % predicted and L/min) were pooled using a standardized mean difference (SMD). Two reviewers assessed concealment of randomization, blinding of patients and evaluators, and likelihood of selection bias after randomization (whether intention-to-treat analysis was carried out). We stratified the data on the basis of age (adults vs children). Data from parallel and cross-over studies were separated.

The acupuncture review

Method

For the acupuncture review, we searched the Asthma and Wheez* register of the Cochrane Airways Group and the Alternative Medicine Electronic Database from the British Library, in August 2003, for all trials including the following words:

acupuncture OR acupressure OR (electric AND stimulation) OR electrostimulation OR laser therapy OR tens OR (electro* AND acupuncture)*

Additionally, we checked the trial database of the Cochrane field for complementary medicine and reference lists of published reviews. Additional hand searching was carried out. We established automated citation alerts and contacted trialists and researchers in the field of complementary and alternative medical research.

Inclusion criteria

Trials included those in which needles were inserted at acupuncture points or other defined points for therapeutic purposes, or those in which defined acupuncture points were stimulated in another way, such as pressure or using a laser.

We determined the extent to which the sham acupuncture could be construed as an active stimulation of non-acupuncture points or whether it did not involve any points. Studies in which stimulation of active points was compared with no stimulation of the same points (potentially a double-blind study) were analysed separately from studies in which stimulation of active points was compared with stimulation of non-active points.

Results

Eleven studies were included and these are detailed in [Table 1](#).

Table 1 Studies included in the acupuncture systematic review.

Reference	Design and study schedule	Methodological quality (Jadad score)*	Participants	Outcomes	Results
Biernacki and Peake ²⁷	Cross-over: 2 months run-in, treatment on 1 day, follow-up 2 weeks, then crossed over	1-1-1	23	Pulmonary function (30, 60 min and 2 weeks after treatment), quality of life (2 weeks after treatment) and rescue medication usage (average of daily use for 2 weeks after treatment)	No overall significant difference between real and sham on objective outcome measures
Christensen et al. ²⁵	Parallel group: 11 weeks (2 weeks baseline period)	2-2-0	18	Pulmonary function, subjective symptoms, drug use at -2, 0, 2, 5 and 9 weeks. IgE levels at 0, 5 and 9 weeks	All results seem to favour acupuncture but, because of the small sample size, definite conclusions cannot be drawn
Dias et al. ³⁰	Parallel group: varying observation periods for different patients (2–12 weeks)	1-2-0	20	Pulmonary function, drug use, subjective assessment (before and after acupuncture treatment)	Results seem to favour sham acupuncture but, because of small sample size and methodological flaws, definite conclusion cannot be drawn
Hirsch and Leupold ²⁰	Cross-over: 5 weeks each phase, no washout	0-2-1	39	Peak flow, subjective symptoms and drug use recorded daily by the patient. Spirometry and provocation test before and after each treatment phase	Overall, no significant differences between the groups
Joos et al. ²³	Parallel group: 4 weeks baseline, 4 weeks treatment, and 12 weeks follow-up	1-0-1	38	Pulmonary function, drug use, subjective assessment, immunologic parameters	No significant changes in lung function, significant reduction of drug use in both groups (more in correct acupuncture group)
Malmström et al. ²⁸	Parallel group: run-in up to 12 weeks, 15 weeks treatment, followed-up 2 weeks after final treatment	2-0-1	27	Published: pulmonary function (induced attack); Unpublished: pulmonary function (at set points) and drug use	No significant effect of treatment reported in bronchial responsiveness to induced attack

Medici et al. ²²	Parallel group: 8 weeks treatment, 8 week break, 8 weeks treatment, then follow-up at 40 weeks	1-1-1	66	Pulmonary function, subjective symptoms, drug use, immunologic parameters	Significant results in favour of acupuncture in PEF variability; by 10 months the differences between the groups had disappeared
Mitchell and Wells ²⁴	Parallel group: 38 weeks (plus 4 weeks baseline)	1-2-0	31	Pulmonary function, drug use and subjective symptoms	No significant differences between groups
Shapira et al. ²⁹	Cross-over: 1 week treatment, 3 week wash-out/follow-up, then crossed over, 3 week follow-up	1-1-1	23	Pulmonary function, drug use and subjective symptoms	No significant change in lung functions, bronchial hyper-reactivity or patient symptoms
Tandon et al. ¹⁹	Cross-over: 3 weeks baseline, 5 weeks treatment 1, 3 weeks wash-out, 5 weeks treatment 2	2-2-0	15	Pulmonary function, drug use, symptom score and treatment preference	No significant effects between or within groups
Tashkin et al. ²⁶	Cross-over: 4 weeks baseline, 4 weeks treatment 1, 3 weeks wash-out, 4 weeks treatment 2, 3 weeks follow-up	1-2-0	25	Pulmonary function, subjective measurements, drug use, number of attacks	No significant differences between or within groups

PEF, peak expiratory flow.
 *Jadad scores¹⁷ reflect the points awarded for the three component domains in the order of: randomization (0, 1 or 2), blinding (0, 1 or 2) and withdrawals (0 or 1).

Asthma was defined as reversible airways obstruction. Criteria varied between trials, with four trials using guidelines for the definition of asthma: either ATS¹⁸ criteria,^{19,20} GINA²¹ criteria,²² or Deutsche Atemwegsliga criteria.²³ Other trialists used a measure of lung function^{24–29} or poor response to Western drugs³⁰ as inclusion criteria.

All studies recruited adult participants with the exception of one study,²⁰ which included children only. Another study recruited a mixed population.²⁶ Although it was not clear in all cases, we have assumed that all participants were outpatients drawn from a variety of hospital settings.

Severity of asthma was mild to moderate in all studies except one,²⁶ which recruited participants with “moderate to severe” asthma.

We analysed laser and needle acupuncture separately. The two laser acupuncture studies^{19,20} used sham acupuncture with the lasers switched off.

No study explicitly described the method of randomization. All trials attempted to blind patients and evaluators except for two studies,^{23,28} in which only the patients were blinded. Although the description of drop-outs and withdrawals was adequate in six studies,^{20,22,23,27–29} no study reported the results of an intention-to-treat population. The experience and training of the acupuncture therapist was unclear in most studies.

Needle acupuncture versus sham needle acupuncture

A number of studies^{20,22–27,29,30} measured lung function at varying time points. Data were pooled for FEV₁ after treatment with acupuncture or sham, and no significant difference was observed (SMD 0.12, 95% CI –0.31 to 0.55).^{27,29} All the remaining studies reported non-significant differences.

Seven of the eight needle acupuncture studies attempted to monitor drug use,^{25–30} but there were important differences in monitoring and assessment methods. Two trials^{23,25} found statistically significant decreases in medication usage vs sham treatment, although values were only reported in one study.²³

Two trials measured perceived improvement in overall wellbeing,^{23,30} with no significant difference between sham and active acupuncture for the likelihood of improvement (RR: 1.13, 95% CI 0.51–2.51). One study²⁷ reported scores on the Asthma Quality of Life Questionnaire, and detected a significant improvement after treatment in both groups (active treatment: $P = 0.003$; sham treatment: $P = 0.005$).

Symptoms were measured in four studies.^{24–26,29} No significant differences between treatment and sham acupuncture were observed in three of

these.^{24,26,29} The fourth study²⁵ reported a significant decrease in daily symptom score vs placebo ($P < 0.05$), but baseline values were higher in the active treatment group. However, weekly scores were significantly higher in the active treatment group compared with placebo at week 4 ($P < 0.05$), but no difference was observed at later time points.

Laser acupuncture versus sham laser acupuncture

These two studies^{19,20} did not detect significant differences for lung function or symptom scores. No difference in medication usage was reported in one of these studies.¹⁹

Needle acupuncture versus sham laser acupuncture

No significant difference was observed between treatment and control groups for morning peak flow or medication usage at 90 days.²⁸

Discussion

This review highlights the fact that any trial of acupuncture is inherently complex, and that many different parameters need to be controlled for and investigated. It could be questioned whether the acupuncture used in the studies is representative of that used in practice. Acupuncture often comes as part of a package of care that includes diet and herbal medicines, and it may not use a “standardized” (i.e. pre-specified points) treatment strategy. Adherence to the Standards for Reporting Interventions in Controlled Trials of Acupuncture guidelines³¹ could improve the validity of future clinical trials.

There is a lack of evidence that short-term (1–12 weeks) acupuncture treatment has a significant effect on the course of asthma when used in conjunction with drug-maintenance treatment. However, in usual practice, acupuncture therapy may last longer than a 12-week course. Some studies did report significant positive changes in subjective parameters and medication use, and we cannot exclude the possibility that some patients with asthma may benefit from acupuncture.

The homeopathy review

Method

For the homeopathy review, we searched the Asthma and Wheez* database of the Cochrane

Airways Group for all trials including the word *homeop** and *homeop**. Additionally, we checked the trial database of the initiative for a Cochrane Complementary Medicine Field, the databases of the Glasgow Homeopathic Library (Scotland), the Centre for Complementary Medicine Research (University of Munich, Germany), and the reference lists of published reviews and papers.

Results

Differences in the interventions used in the trials raised many questions concerning how to analyse the findings of the studies. The studies could be divided into the following categories: (1) Individualized and formula; the approach to treatment differs sufficiently between these two to merit separation. This division would be helpful in addressing the question of package of care, as that associated with "individualized" differs greatly from that provided with "formula" homeopathy, which by its very nature is generic; (2) adults and children; and (3) homeopathy and isopathy. Six trials were included,^{32–37} detailed in Table 2.

All of the included studies were described as randomized, double-blind, placebo-controlled, parallel group trials. Diagnosis was variously defined in terms of respiratory function,³² symptoms,³³ clinical history and spirometry,³⁴ clinical history, spirometry and medication usage,³⁵ lung function, symptoms and medication usage,³⁶ and general practitioner diagnosis and medication prescription.³⁷

Participants suffered from mild-to-moderate asthma³⁷ or mixed severity (mild to severe).^{33,36} No attempt was made to grade severity in three of the studies.^{32,34,35}

Two studies recruited children only (of 1–12 years³³ or 4–16 years³⁷). The other four studies recruited adults only (> 16 years;³² 24–48 years;³⁴ 36–70 years;³⁵ 18–55 years³⁶). Two studies^{32,36} used allergen-based homeopathic treatments (isopathy).

No details were given in one of the studies³³ on the use of concomitant therapies. Most participants in all the remaining studies were described as taking medication to control their asthma.

Interventions

Active treatment was compared with placebo as an adjunct to usual care in all of the studies. Four studies used homeopathic dilutions, either single remedies (*Blatta officinalis* C6³³), individualized remedies (classical homeopathy³⁷), or a standardized combination (Engystol N containing Vincetox-

in D6/D10/D30 and sulfur D4/D10;³⁴ and Asthma H containing 14 different potencies of either D3, D4, D5 or D6³⁵). Two studies^{32,36} used isopathy, both to 30C. Duration of treatment in the studies ranged from 1 day³⁶ (plus 16-week follow-up) to 1 year³⁷ (with up to six consultations over 1 year).

Methodological quality of included studies

The overall study quality was deemed to be mixed (see Table 2 for Jadad¹⁷ scores). All studies were double-blind.

Although the aim of the review was to establish the efficacy of homeopathy compared with placebo, all the studies administered homeopathic treatment in addition to usual care. In most instances, this was in addition to steroids or β 2-agonists. The effects of these medications may have confounded potential benefits of homeopathy.

The reviewers felt that, across the studies, the severity of asthma was largely mild to moderate. This limits the applicability of this review to patients with more severe asthma.

Owing to the heterogeneity of trials (in terms of patients, interventions, and outcome assessment), quantitative meta-analysis of the studies was limited. We have only been able to assess homeopathic treatments in addition to usual care.

Formula homeopathy versus placebo (in addition to usual care)

One study³² found that the severity of symptoms quantified by a daily visual analogue scale differed significantly between the groups ($P = 0.003$). No significant difference was observed for peak expiratory flow rate. Another study³⁶ reported no significant difference between treatment and control either after treatment or at 15-weeks follow-up.

The data for morning peak expiratory flow could not be pooled because of differences in the studies. One study³⁴ reported a significant difference between homeopathy and control in favour of homeopathy (no P value reported). Another study³⁶ reported no significant difference after treatment and at 15-week follow-up.

The reported FEV₁ data could be pooled for two of the studies.^{35,36} No significant difference was observed (-0.06 l; 95% CI -0.17 to 0.04). One study³² assessed the difference between the medians with 95% confidence intervals. No significant difference was detected.

Table 2 Studies included in the homeopathy review.

Reference	Design and study schedule	Methodological quality (Jadad score)*	Participants	Outcomes	Results
Freitas et al. ³³	Parallel group: 6 months	1-2-1	69	Frequency, duration and intensity of bronchospastic episodes and a score combining these three measures. Lung function or medication used does not seem to have been documented	No significant difference was reported
Lewith et al. ³⁶	Parallel group: 4 weeks run-in, 1 day treatment, 16 weeks follow-up	2-2-1	242	Lung function, medication use, subjective symptoms	No difference in effect found
Matusiewicz et al. ³⁴	Parallel group: 6 months	0-1-0	40	Lung function, medication use, granulocyte function	"Clear difference" reported
Matusiewicz et al. ³⁵	Parallel group: 9 months	1-1-0	84	Lung function, medication use, immune system functioning	Significant effect reported in terms of medication use, immune functioning, global rating and number of infections
Reilly et al. ³²	Parallel group: 4 weeks placebo run-in and pre-randomization qualification period, 4 weeks treatment phase, 4 weeks optional follow-up	1-2-1	28	Predefined main outcome measure was the change of subjective symptoms measured on a 100 mm visual analogue scale. Additional outcomes were lung function and a numerical symptom scale	Significant difference found for severity of symptom reporting
White et al. ³⁷	Parallel group: 52 weeks of treatment, followed-up at end of this period	2-2-1	93	Lung function at 4, 8 and 52 weeks (only reported at 52 weeks); quality of life	No significant difference was reported

*Jadad scores¹⁷ reflect the points awarded for the three component domains in the order of: randomization (0, 1 or 2), blinding (0, 1 or 2) and withdrawals (0 or 1).

One study³⁴ reported that there was a “clear difference” between treatment and control, but no statistical analysis was presented.

For FVC, no data could be pooled due to differences in the studies. One study³² reported a significant difference between the medians of the groups ($P = 0.03$). Another study³⁴ reported a “clear difference” of 1.3 L, but again the results of statistical tests were not reported. A third study³⁵ reported no significant differences in the treatment group compared with control.

Medication usage

Two studies^{34,35} reported steroid usage. One of them³⁴ showed a “clear difference” between treatment and control in terms of oral steroid use (no P value reported). The other study³⁵ reported inhaled triamcinolone usage with treatment leading to a significant reduction in medication use ($P < 0.01$). No significant difference was reported in bronchodilator usage after treatment or at 15-week follow-up in a third study.³⁶

Exacerbations

One study³³ measured intensity, frequency and duration of exacerbations in 86 children. No significant difference was reported between the groups in terms of intensity, frequency and duration of exacerbations.

Individualized homeopathy versus placebo (in addition to usual care)

One study measured individualized homeopathy.³⁷ No significant difference was found between treatment and control on symptoms, lung function, quality of life, medication usage, global assessment, and adverse effects.

Discussion

There did seem to be substantial differences between the studies in terms of the package of care provided. For example, in one study,³⁷ there was extensive telephone contact and changes in remedy in addition to six consultations. It is difficult to see how this can be assessed alongside some of the less extensive “one off” treatments offered in two of the studies.^{32,36}

The currently available evidence makes it difficult to reliably assess the possible role of homeopathy in the treatment of asthma. We did not have

enough information to explore the effects of separate remedies and potencies. Although the scientific rationale behind homeopathy remains unproven, non-specific benefits associated with a “holistic” package of care may exist. The effect of homeopathy on asthma has yet to be proven in a randomized study.

Conclusion

There is currently not enough good evidence to recommend either acupuncture or homeopathy in the management of asthma as a front-line therapy. Nevertheless, the holistic approach adopted by the trialists featured in these reviews to patient care may make such alternative treatments appealing to patients and their carers. More research into both of these treatments is warranted, paying particular attention to the way these therapies are practiced.

The “package of care” issue in future trials is an important one and applies to both acupuncture and homeopathy. Acupuncture in practice is often one aspect of a complex package of treatments. In the absence of a scientific rationale for homeopathy, some would argue that any observed effect cannot be seen outside the context of the entire treatment package, which consists of one-on-one, in depth, “holistic” consultation, administration of homeopathic treatment, and follow-up. Until studies can adequately estimate the effect of a “package of care”, the effects of these two alternative treatment strategies will be difficult to quantify and qualify. Studies conducted with two control treatment groups (i.e. one arm that receives the package and a placebo intervention, and another that only receives the placebo intervention) might offer some useful insights into patient expectations of this type of care, and how they respond to close attention from qualified specialists.

Practice points

- There is not enough evidence to recommend the use of acupuncture in the treatment of asthma.
- An open-minded approach, however, is recommended with complementary treatments to encourage disclosure and appreciate that the holistic approach often used with these types of therapies can appeal and be of some benefit.

Research directions

- Future research could investigate the importance of the "package of care".

References

- Janson C, Anto J, Burney P, et al. The European community respiratory health survey II: what are the main results so far? *Eur Respir J* 2001;18:598–611.
- House of Lords Science and Technology Committee. *Complementary and alternative medicine*, vol. 6. London: HMSO; 2000.
- Eisenberg DM, Davis RB, Ettner SL, et al. Trends in alternative medicine use in the United States, 1990–1997: results of a follow-up national survey. *JAMA* 1998;280:1569–75.
- Sirois FM, Gick ML. An investigation of the health beliefs and motivations of complementary medicine clients. *Soc Sci Med* 2002;55:1025–37.
- Thorne S, Paterson B, Russell C, Schultz A. Complementary/alternative medicine in chronic illness as informed self-care decision making. *Int J Nurs Stud* 2002;39:671–83.
- Blanc PD, Trupin L, Earnest G, et al. Alternative therapies among adults with a reported diagnosis of asthma or rhinosinusitis. *Chest* 2001;120:1461–7.
- Green S, Buchbinder R, Barnsley L, et al. Acupuncture for lateral elbow pain (Cochrane Review). In: *The Cochrane library*, Issue 3. Oxford: Update Software; 2003.
- Knipschild P, Kleijnen J, ter Riet G. Belief in the efficacy of alternative medicine among general practitioners in the Netherlands. *Soc Sci Med* 1990;31:625–6.
- Querfurt H. Alternative Behandlungsweisen aus der Sicht der pneumologischen Praxis. *Atemwegs Lungenkr* 1995;21:11–8.
- Vandenbroucke JP. Homoeopathy trials: going nowhere. *Lancet* 1997;350:824.
- Berezin AA. Isotopical positional correlations as a possible model for Benveniste experiments. *Med Hypotheses* 1990;31:43–5.
- Anagnostatos GS. Small water clusters (clathrates) in the homoeopathic preparation process. In: Endler PC, Schulte J, editors. *Ultra high dilution—physiology and physics*. Dordrecht: Kluwer Academic Publications; 1994. p. 121–8.
- del Giudice E. Is the "memory of water" a physical impossibility? In: Endler PC, Schulte J, editors. *Ultra high dilution—physiology and physics*. Dordrecht: Kluwer Academic Publications; 1994. p. 117–20.
- Lo SY, Lo A, Chong LW, Tianzhang L, Hua LH, Geng K. Physical properties of water with I–E structures. *Mod Phys Lett B* 1996;10:921–30.
- McCarney RW, Brinkhaus B, Lasserson TJ, Linde K. Acupuncture for chronic asthma (Cochrane Review). In: *The Cochrane library*, Issue 1. Oxford: Update Software; 2004.
- McCarney RW, Linde K, Lasserson TJ. Homeopathy for chronic asthma (Cochrane Review). In: *The Cochrane library*, Issue 1. Oxford: Update Software; 2004.
- Jadad AR, Moore RA, Carrol D, et al. Assessing the quality of reports of randomized clinical trials: is blinding necessary? *Control Clin Trials* 1996;17:1–12.
- American Thoracic Society. Standards for the diagnosis, care of patients with chronic obstructive pulmonary disease (COPD) and asthma. *Am Rev Respir Dis* 1985;136:228–9.
- Tandon MK, Soh PFT, Wood AT. Acupuncture for bronchial asthma? A double-blind crossover study. *Med J Aust* 1991;154:409–12.
- Hirsch D, Leupold W. Plazebo-kontrollierte Doppelblindstudie zur Wirkung der Laserakupunktur beim kindlichen Asthma bronchiale. *Atemwegs Lungenkr* 1994;20:701–5.
- NHLBI/WHO Workshop. *www.ginasthma.com*, 2nd ed. Washington: NIH Publication; 2002.
- Medici TC, Grebski E, Wu J, Hinz G, Wuthrich B. Acupuncture and bronchial asthma: a long-term randomized study of the effects of real versus sham acupuncture compared to controls in patients with bronchial asthma. *J Altern Complement Med* 2002;8:737–50.
- Joos S, Schott C, Zou H, Daniel V, Martin E. Immunomodulatory effects of acupuncture in the treatment of allergic asthma: a randomized controlled study. *J Altern Complement Med* 2000;6:519–25.
- Mitchell P, Wells JE. Acupuncture for chronic asthma: a controlled trial with six months follow-up. *Am J Acupuncture* 1989;17:5–13.
- Christensen PA, Laursen LC, Taudorf E, Størensens SC, Weeke B. Acupuncture and bronchial asthma. *Allergy* 1984;39:379–85.
- Tashkin DP, Kroening RJ, Bresler DE, Simmons M, Coulson AH, Kerschner H. A controlled trial of real and simulated acupuncture in the management of chronic asthma. *J Allergy Clin Immunol* 1985;76:855–64.
- Biernacki W, Peake MD. Acupuncture in the treatment of stable asthma. *Respir Med* 1998;92:1142–5.
- Malmström M, Ahlner J, Carlsson C, Schmekel B. No effect of chinese acupuncture on isocapnic hyperventilation with cold air in asthmatics, measured with impulse oscillometry. *Acupunct Med* 2002;20:80–7.
- Shapira MY, Berkman N, Ben-David G, Avital A, Bardach E, Breuer R. Short-term acupuncture therapy is of no benefit in patients with moderate persistent asthma. *Chest* 2002;121:1396–400.
- Dias PLR, Subramaniam S, Lionel NDW. Effects of acupuncture in bronchial asthma: preliminary communication. *J R Soc Med* 1982;75:245–8.
- MacPherson H, White A, Cummings M, Jobst K, Rose K, Niemtzow R. Standards for reporting interventions in controlled trials of acupuncture: the stricta recommendations. *Complement Ther Med* 2001;9:246–9.
- Reilly D, Taylor MA, Beattie NGM, et al. Is evidence for homoeopathy reproducible? *Lancet* 1994;344:1601–6.
- Freitas LAS, Goldenstein E, Sanna OM. The indirect doctor-patient relationship and the homoeopathic treatment of asthma in children. *Rev Homeopatia* 1995;60:26–31.
- Matusiewicz R. Wirksamkeit von Engystol N bei Bronchialasthma unter kortikoidabhängiger Therapie. *Biol Med* 1995;24:242–6.
- Matusiewicz R, Wasniewski J, Sterna-Bazanska A, Hulsberg M. Behandlung des chronischen asthma bronchiale mit einem homöopathischen komplexmittel. *EHK* 1999;6:367–74.
- Lewith GT, Watkins AD, Hyland ME, et al. Use of ultra-molecular potencies of allergen to treat asthmatic people allergic to house dust mite: double blind randomised controlled clinical trial. *BMJ* 2002;324:1–5.
- White A, Slade P, Hunt C, Hart A, Ernst E. Individualised homeopathy as an adjunct in the treatment of childhood asthma: a randomised placebo controlled trial. *Thorax* 2003;58:317–21.